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ABSTRACT

The impact of eight cultural institutions on the economy of the St. Louis (Missouri) area was determined by measuring their 1978 direct and indirect financial effects. The institutions are the St. Louis Art Museum, St. Louis Conservatory and School for the Arts, Missouri Botannical Garden, St. Louis Symphony, McDonnell Planetarium, Loretto-Hilton Repertory Theatre, Museum of Science and Natural History, and the Dance Concert Society. Data gathered from the eight institutions included operating and financial characteristics and total expenditures with local firms. Staff and audience surveys, tax rates and bases for all local jurisdications, local government expenditures, and the number of local housing units were also obtained. Direct local expenditures amounted to $20,910,625. Twenty-five percent went toward local expenditures for goods and services, 37 percent for salaries and wages, 32 percent was filtered into the economy through local audience spending, and 6 percent through non-local audience spending. Guest artists spent over $119,500 locally. Secondary business volume generated by institution-related effects came to $1,117,000 while costs to local government amounted to $3,987,400. (KC)

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THE ECONOMIC IMPACT
OF EIGHT CULTURAL INSTITUTIONS
ON THE ECONOMY OF THE ST. LOUIS SMSA

1980

The Johns Hopkins University
Center for Metropolitan Planning and Research

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In recent years there has been a growing interest in understanding better the status and community impact of artistic and cultural institutions. This case study is one of six conducted as a continuation of a research effort begun in 1976. These efforts have been supported by the National Endowment for the Arts through its Research Division. (The history of the entire project is described in the "Introduction" section to this report.) We thank the Endowment for its support and acknowledge also cost sharing provided by the Johns Hopkins University and participating agencies.

The successful completion of this six city project was due to the efforts of a number of persons in the participating cities and institutions. We are most pleased to acknowledge the principal project staff at the Arts and Education Council of Greater St. Louis. Richard Tombaugh, Executive Director, served as Study Director. Joe Davis of Resources Management, Inc. was responsible for coordinating the project including the wide array of day-to-day tasks and responsibilities described in the technical supplement to this report.

Exhibit 1 lists the staff persons and volunteers identified by the Arts and Education Council of Greater St. Louis as individuals who actively participated in the study. We want to express our thanks not only to them but to the institutional staff who cooperated so magnificently in all phases of the study effort. We also acknowledge and appreciate the efforts of Mark Twain Bancshares in gathering community data, and the efforts of the St. Louis Regional Commerce and Growth Association and the Regional Planning Council in reviewing data and providing supplemental material.

Exhibit 1

Acknowledgements

ARTS AND EDUCATION COUNCIL OF GREATER ST. LOUIS

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Mr. Mark Twain Bancshares

At the Center for Metropolitan Planning and Research a number of persons assisted in the design and implementation of the research program and in the evaluation and analysis of data and methods. D. Alden Smith served as project manager and participated in the design of data management and documentation procedures. He was also principally responsible for the computations required to apply our economic impact model, including the development of techniques to appropriately weight as required various audience and other data. Ralph Taylor participated in the design of questionnaires and audience survey sampling frames. He was also responsible for the design and analysis of surveys to assess the local impact of study findings. Henry Henderson assisted in the design of the community data inventory, including the identification of local data sources. Mark Keintz was responsible for project related computer data processing. We acknowledge also the assistance of David Greytak of Syracuse University in developing model coefficients appropriate for each examined city.

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This report provides further evidence of the variety of skills required in the conduct and reporting of research. We are all especially grateful to Patty Strott for undertaking the role of project secretary. She was responsible for various facets of project organization and communication including the painstaking task of typing successive drafts and final reports.

David Cwi

PREFACE: ORGANIZATION OF THIS REPORT

This report presents a case study of the economic impact of eight institutions on the economy of the St. Louis metropolitan area. The "Introduction" briefly presents the history and purpose of the project, and indicates the process by which cities and institutions were selected.

The report continues with a section briefly describing the St. Louis area economy and the broader arts community. The third section of the report presents our findings concerning the economic effects of the examined institutions. This section begins with an outline of the study approach, data requirements, and methods. Included is a review of the limited nature of our analysis. Findings are presented in terms of direct and secondary effects on local business volume, personal incomes and jobs, business investment and expansion of the local credit base together with effects on government revenues and expenditures.

A variety of technical matters concerning data quality and analytical methods are addressed in this section, especially matters involving local and visitor audience spending. The reader is referred to a detailed technical supplement for a more complete discussion of data handling and methodological issues.

The final section of the report is devoted to a further review of the limited nature of our analysis, including a discussion of the less tangible economic effects that have not been identified. Caveats are reviewed regarding the use of the data for the development of arts and economic development policies.

SECTION I: INTRODUCTION

A. The History of the Project

This report is one of a set of six case studies of the economic impact of arts activities conducted during fiscal 1978 by staff of the Johns Hopkins University Center for Metropolitan Planning and Research in partnership with arts agencies in: Columbus, Minneapolis-St. Paul, Springfield, Illinois, Salt Lake City, St. Louis and San Antonio.* The studies are a continuation of a pilot effort conducted in Baltimore in fiscal 1976.** Research has been supported by the National Endowment for the Arts with significant cost sharing and donated services by the Johns Hopkins University and local sponsoring agencies. An overview and analysis of the six city Partnership Cities Project is currently in progress and will result in a separate report. A technical supplement for each case study is also being prepared. It will include a review of study procedures in each city and the data used in estimating various effects.

The six participating cities were selected from an initial group of approximately 70 cities and institutions that had responded to either letters sent to local and state arts agencies or announcements in arts-related publications. Approximately 20 agencies continued to express

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*Study sponsors include The Greater Columbus Arts Council, Twin Cities Metropolitan Arts Alliance, Springboard, The Utah Arts Council, The Arts and Education Council of Greater St. Louis, and the Arts Council of San Antonio.

**David Cwi and Katharine Lyall, Economic Impacts of Arts and Cultural Institutions: A Model for Assessment and a Case Study in Baltimore, Research Division Report #6. New York: Publishing Center for Cultural Resources, 1977.

interest after evaluating the level of effort required for participation. A national advisory committee helped in the selection of the final six cities.

Exhibit 2 presents the partnership cities and examined institutions. They are scattered throughout the United States and include a variety of different types of museums and performing arts organizations. It is important to note that they are not a scientific sample but rather an illustrative cross section of some of the more well-known local resources in each city. A variety of arts agencies are represented as study sponsors, each of whom utilized somewhat different management plans and local resources. Our overview and analysis of the entire six city project will include an assessment of the impact of these different arrangements on study conduct.

B. Project Objectives

The Arts Endowment's original decision to support the development of a model to assess the economic impact of the arts was made in response to intense interest by arts agencies and institutions in methodologies for the conduct of economic impact studies. Our approach was intended to enable local agencies and institutions to conduct useful and credible studies given limited resources for research purposes.

The approach developed and piloted in Baltimore utilized a 30 equation model to identify a variety of effects involving not only businesses but government and individuals as well.* The model utilizes data from the

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*This model was adapted from J. Caffrey and H. Isaacs, Estimating the Impact of a College or University on the Local Economy (Washington, D.C.: American Council on Education, 1971).

Exhibit 2

List of Participating Institutions

Minneapolis/St. Paul

The Children's Theatre
Chimera Theatre
The Cricket Theatre
The Guthrie Theater
Minneapolis Institute of Arts
Minnesota Dance Theatre
Minnesota Orchestra
St. Paul Chamber Orchestra
Walker Art Center
The Science Museum of Minnesota

Salt Lake City

Ballet West
Pioneer Memorial Theatre
Repertory Dance Theatre
Salt Lake Art Center
Theatre 138
Tiffany's Attic
Utah Museum of Fine Arts
Utah Symphony
Utah Opera Company
Ririe-Woodbury Dance Co.

Springfield

Springfield Symphony Orchestra
Springfield Theatre Guild
Springfield Art Association
Springfield Ballet
Art Collection in Illinois State Museum
Old State Capitol
Community Concert Series
Springfield Municipal Opera
Old State Capitol Art Fair
Great American People Show

St. Louis

St. Louis Art Museum
St. Louis Conservatory & School for the Arts (CASA)
St. Louis Symphony
Missouri Botanical Garden
McDonnell Planetarium
Loretto-Hilton Repertory Theatre
Museum of Science and Natural History
Dance Concert Society

Columbus

Ballet Metropolitan
Columbus Museum of Art
Columbus Symphony Orchestra
Center of Science & Industry
Players Theatre of Columbus
Columbus Association for the Performing Arts (Ohio Theatre)

San Antonio

San Antonio Symphony
San Antonio Opera
The Witte Museum
Museum of Transportation
The Carver Cultural Center

internal records of examined arts institutions as well as from local, state, and federal sources. Audience research is also required as well as a survey of the staff of examined institutions. Consequently, the study process can provide sponsors with an opportunity to develop a data base on audiences, staff, and institutional operating characteristics that can be updated over time and may be useful in its own right. In the context of the work conducted up to that time, the Baltimore Case Study made several advances which are described in that report.

Following the dissemination of the study, questions were raised regarding the impact of arts organizations in other communities. It was hoped that additional case studies focusing on a wide array of institutions would lead to a better understanding of the economic effects of various types of arts activities in alternative community settings.

The six individual case studies deal with a limited set of local cultural attractions. The necessity to conduct simultaneous audience studies over several weeks as well as other demands imposed by study methods sharply limit the number of institutions that can be included. The case studies report on the impact of illustrative institutions selected by the local sponsoring agencies. They are not studies of the impact of all local artistic and cultural activities.

C. The Institutions Examined in St. Louis

This report is the result of research on the audiences, staff, and financial and operating characteristics of the following eight cultural institutions in the St. Louis SMSA:

St. Louis Art Museum
St. Louis Conservatory & School for the Arts (CASA)
St. Louis Symphony
Missouri Botanical Garden
McDonnell Planetarium
Loretto-Hilton Repertory Theatre
Museum of Science and Natural History
Dance Concert Society

These institutions represent a wide range of institutional types and include some of the more well-known local organizations. The institutions were selected for study by the Arts and Education Council of Greater St. Louis as a result of a process initiated locally to identify interested organizations. Principal project staff at the Arts and Education Council of Greater St. Louis together with active local participants are cited in the acknowledgements at the outset of this report.

The examined activities are examples of the importance of committed individuals and groups to the development of local cultural institutions. The Saint Louis Conservatory and School for the Arts (CASA) was founded in 1974 as the result of a merger between a collegiate level institute (the St. Louis Institute of Music) and an inner city "community school" (the Community Music School). In 1977-78 CASA had an enrollment of more than 1,200 students at four branches who received instruction in music, voice, dance, drama, and art.

The Missouri Botanical Garden opened to the public in 1859, largely due to the vision of Henry Shaw, a retired businessman. It was the first botanical garden in the United States and considers research, education and display to be its three primary functions. The library at the Missouri Botanical Garden is considered among the top four or five botanical libraries in the world.

The Dance Concert Society was founded in 1966 to sponsor nationally and internationally acclaimed contemporary dance companies in performance.

The Society's scope has widened recently to include the sponsorship of extended educational residences of four or more companies each year.

The Loretto-Hilton Center was opened by Webster College in 1966. The first professional company produced by Webster College suffered heavy debts, and was closed after four years of operation. The theatre opened in 1971 as an independent not-for-profit corporation under an arrangement that allows the theatre to use the college-owned facilities. In addition to the mainstage program, this professional repertory theatre also produces a touring company that performs for elementary and junior high school students, as well as for immobilized senior citizens.

The Saint Louis Symphony Orchestra is the nation's second oldest major orchestra and ranked among the best in the United States. The Symphony's permanent home is Powell Symphony Hall, formerly the St. Louis Theatre (remodeled in 1968). During the 1977-1978 season there were 59 regular subscription concerts, 15 Pops concerts, 10 special Christmas concerts, 45 educational concerts for children and young adults, and a six concert Baroque Orchestra series, all held in Powell Hall. The Symphony presented an additional 50 concerts in the area, and toured in 31 cities.

The St. Louis Art Museum was founded in 1907. The Museum is now a subdistrict of the Metropolitan Zoological Park and Museum District established in 1971 by an act of the Missouri State Legislature. The Museum is well-known for its Galleries of Primitive and Pre-Columbian Art.

The Museum of Science and Natural History is another subdistrict of the Metropolitan Zoological Park and Museum District. The Museum, as presently constituted, was founded in 1972.

The McDonnell Planetarium was financed by a 1956 bond issue, and opened to the public in 1963. Currently, the Planetarium is also a subdistrict of the Metropolitan Zoological Park and Museum District.

In the following section we place the examined institutions within the broader context of the St. Louis economy and arts community.

SECTION II: THE ST. LOUIS ECONOMY AND ITS ARTS COMMUNITY: AN OVERVIEW

The next section of this report discusses study findings and reviews the strengths and limitations of our approach to examining economic effects. To appreciate this discussion as well as the effects attributed to the eight examined institutions, it is useful to examine the economy and broader arts community of the St. Louis Metropolitan Area briefly. Exhibit 3 presents selected data of interest on the St. Louis area market.

The St. Louis Standard Metropolitan Statistical Area (SMSA) consists of the City of St. Louis; the Missouri counties of Franklin, Jefferson, St. Charles, and St. Louis; and the Illinois counties of Clinton, Madison, Monroe, and St. Clair. In 1977 the St. Louis SMSA ranked 12th in the nation with a population of 2,378,000. This represented a 1.3% drop from 1970, when the St. Louis SMSA ranked 10th with a population of 2,410,884.[1] The estimated population in 1978 was 2,453,000.[2]

Situated on the banks of the Mississippi River and close to the mouth of the Missouri River, St. Louis was founded as a French fur-trading post in 1764. The town later passed into Spanish and finally American ownership. In the early 19th century, St. Louis became the primary starting point for pioneers moving west.

The St. Louis business community includes 14 firms in the Forbes top 500 for sales, with 12 St. Louis-based firms in the top 500 for assets.[3]

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[1] County and City Data Book 1977, U.S. Department of Commerce, Census Bureau, p. 578, 696.

[2] Mark Twain Bancshares

[3] Forbes, May 1978.

Exhibit 3

Demographic Data on Households in the St. Louis SMSA

SMSA

INCOME						
1977 Median Household Effective Buying Income (1)	% of Households by EBI Group (1)* (A) $8,000 - $10,000 (B) $10,000 - $14,999 (C) $15,000 - $24,999 (D) $25,000 and over				Average Annual Change in per Capita Income, 1969 to 1974 (2)	1969 Median Family Income (3)
	(A)	(B)	(C)	(D)		
$16,876	5.4	16.6	34.9	22.3	7.3%	$10,504

CITY

INCOME						
1977 Median Household Effective Buying Income (1)	% of Households by EBI Group (1)* (A) $8,000 - $10,000 (B) $10,000 - $14,999 (C) $15,000 - $24,999 (D) $25,000 and over				Average Annual Change in per Capita Income, 1969 to 1974 (2)	1969 Median Family Income (2)
	(A)	(B)	(C)	(D)		
$12,268	7.8	19.1	27.1	12.5	7.7%	$8,173

*Effective Buying Income refers to personal income less personal tax and nontax payments. Nontax payments include fines, fees, penalties, and personal contributions for social insurance.

SOURCES: (1) Sales and Marketing Management, Vol. 121, No. 2, July 24, 1978, P. C. - 126.
(2) County and City Data Book 1977, U.S. Dept. of Commerce, Census Bureau, p. 580-581, p. 698-699.
(3) 1970 Census of Population, U.S. Department of Commerce, Census Bureau, Table 89.

Exhibit 3 (cont'd)

SMSA

Age (As of 12/31/77)					EDUCATION, 1970 Persons 25 Years Old and Over School Years Completed (2)			
Median Age of Pop. (1)	% of Pop. by Age Group (1) 18-24 Yrs.	25-34 Yrs.	35-49 Yrs.	50 and Over	Median	Less than 5 Yrs.	4 Yrs. of High School Or More	4 Yrs. of College Or More
29.7	12.2	15.6	16.7	24.9	11.7 Yrs.	4.3%	48.0%	10.1%

CITY

Age (As of 12/31/77)					EDUCATION, 1970 Persons 25 Years Old and Over School Years Completed (2)			
Median Age of Pop. (1)	% of Pop. by Age Group (1) 18-24 Yrs.	25-34 Yrs.	35-49 Yrs.	50 and Over	Median	Less than 5 Yrs.	4 Yrs. of High School Or More	4 Yrs. of College Or More
32.3	13.2	13.0	14.0	32.5	9.6 Yrs.	7.3%	33.1%	5.6%

SOURCES: (1) Sales and Marketing Management, Vol. 121, No. 2, July 24, 1978, P. C. - 123, C-124.
(2) County and City Data Book 1972, U.S. Dept. of Commerce, Census Bureau, p. 569, 715.

Exhibit 3 (cont'd)

SMSA

POPULATION				POPULATION CHANGE IN %	
1977 (1)	1975 (2)	1970 (2)	1960 (3)	1970-1975 (2)	1960-1970 (2)
2,378,000	2,366,542	2,410,884	2,060,103	-1.7	12.4

CITY

POPULATION				POPULATION CHANGE IN %	
1977 (1)	1975 (2)	1970 (2)	1960 (3)	1970-1975 (2)	1960-1970 (2)
503,400	524,964	622,236	750,026	-15.6	-17.0

SOURCES: (1) Sales and Marketing Management, Vol. 121, No. 2, July 24, 1978, P.C. - 123, C-124.
(2) County and City Data Book 1977, U.S. Dept. of Commerce, Census Bureau, P. 578, 696.
(3) County and City Data Book 1962, U.S. Dept. of Commerce, Census Bureau, P. 448, 526.

Fortune cited 20 St. Louis-based industrial firms among the nation's top 1,000 industries in 1977.[4]

The area's industrial sector provides the greatest number of local jobs. In particular, the automobile industry is a major employer. Chrysler Corporation and General Motors each employ more than 5,000 persons, while Ford Motor Company and A.C.F. Industries (a motor vehicle parts corporation) each employ more than 3,000. Electrical and energy-related companies are also major employers. Emerson Electric Company, the Union Electric Company, Southwestern Bell Telephone Company, and Olin Corporation each employ more than 5,000 persons, while McGraw-Edison Corporation employs more than 3,000. Other major employers include Famous-Barr and Sears-Roebuck retail department stores, McDonnell-Douglas Corporation, the Monsanto Company, and Washington University. In all, there are 96 organizations that employ 1,000 or more workers.[5]

The broad scope of arts activities available in greater St. Louis is indicated by the large number of institutions (116) that belong to the Arts and Education Council of Greater St. Louis. These institutions range from music and theatre groups to a public radio station and a sculpture garden. The SMSA has 10 colleges and universities as well as five community colleges.[6]

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[4]Fortune, May/June 1978.

[5]Large Employers of Metro St. Louis 1979, Business Information Center, St. Louis Regional Commerce and Growth Association.

[6]The Arts and Education Council of Greater St. Louis: 1977 Annual Report, St. Louis, Mo.

The examined institutions are only eight of the many non-profit arts and cultural organizations in the St. Louis SMSA. These institutions represent a rich array of artistic and cultural activity. While the examined institutions may typify the impact of various types of institutions, they are not intended to represent the full range of locally available commercial and non-profit activities. Consequently, various assumptions will need to be made by individuals seeking to generalize concerning the status and impact of the entire local "cultural industry". It is clear, however, that the examined institutions do not exhaust the impact of this industry, however it is defined. For example, census data for 1970 (which remains the best available until next year) show a total of 5,765 employed Writers, Artists and Entertainers in the St. Louis SMSA.* Total full-time employment at the examined institutions was 510.

Even a casual inspection of the area yellow pages telephone directory reveals a variety of enterprises, some portion of which may be deemed cultural if not the arts. Exhibit 4 cites selected categories within the directory and the number of establishments listed.

Data on the impact of some elements of these additional business sectors is available from the County Business Patterns series (1977). Below are listed, for example, data on various retail establishments used

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*This represents actors, architects, authors, dancers, designers musicians and composers, painters and sculptors, photographers, radio and TV announcers, and a miscellaneous category. Excluded are individuals employed in art galleries and other arts-related positions. Source: Where Artists Live: 1970, Research Division Report #5, A Study by Data Use and Access Laboratories, New York: Publishing Center for Cultural Resources, July 1977.

Exhibit 4

Number of Various Arts and Cultural Establishments

Listed in the St. Louis Metropolitan Area Yellow Pages

Art:	
Galleries and Dealers (1)	41
Metalwork	-
Needlework and Materials	22
Restoration	4
Schools	7
Artists:	
Commercial (2)	45
Fine Arts (2)	7
Materials and Supplies	20
Book Dealers:	
Retail (3)	70
Used and Rare	9
Wholesale	6
Costumes:	
Masquerade and Theatre	3
Craft Supplies	45
Dancing:	
Ballrooms	-
Instruction	58
Supplies	15
Flower Arranging:	
Instruction	-
Glass:	
Stained and Leaded	2
Hobby and Model Supplies:	
Retail	30
Libraries:	
Public	45
Magicians	4
Supplies	1
Motion Picture:	
Supplies and Equipment	2
Film Libraries	6
Laboratories	3
Producers and Studios	9
Murals	1
Museums	11
Music:	
Arrangers and Composers	3
Background	5
Dealers	9
Instruction:	
Instrumental	
Vocal	51
Musical Instruments:	
Dealers	65
Repair	9
Wholesale and Manufacturers	4
Musicians (3)	16
Orchestras and Bands	19
Organs	23
Repair and Tuning	5
Photo Engravers	1
Photo Finishing (Retail)	95
Photographers:	
Aerial	8
Commercial	63
Portrait (4)	87
Supplies and Equipment	
Wholesale	4
Piano and Organ Movers	4
Pianos:	
Instrument	32
Repair and Tuning	25
Quilting	3
Records:	
Retail	33
Wholesale and Manufacturers	-
Sculptors	4
Silver and Goldsmiths	2
Theatres (5)	59
Theatrical:	
Agencies (6)	11
Equipment and Supplies	5
Makeup	4

Source: St. Louis Yellow Pages. May understate the number of establishments in the St. Louis SMSA.

(1) Includes fine arts, graphics, photography, prints, framing.
(2) Includes many specialty shops such as religious, science fiction, adult newsstands, etc.
(3) Includes both individuals and groups.
(4) The percentage of portrait photographers also listed as commercial photographers is 30%.
(5) Includes playhouses, movie houses, adult pictures and driveins.
(6) Includes talent agencies magicians, entertainment camps.

by the general public together with their Standard Industrial Classification code.*

		Number	Employees	Payroll ($000)
SIC 5732	TV-Radio	116	513	4,531
SIC 5733	Music and Record Stores	62	413	2,520
SIC 5942	Bookstores	35	238	1,338
SIC 5946	Photography Stores	32	208	1,118
SIC 7832	Movie Theatres (except drive-in)	46	626+	2,251+
	TOTAL	291	1,998+	11,758+

Other local retail establishments serve the needs of professional artists and amateurs as well as the general public residing both within and outside the St. Louis SMSA. These include industries involved in the manufacture and distribution of arts-related goods and services, ranging from arts and crafts supplies and musical instruments to photographic equipment and books. Arts services overlooked range from television and recording facilities, to movie distribution, conservation and a host of other arts-related production or distribution activities.

In the following section of this report we review our findings concerning the economic impact of the eight examined institutions. The concluding section of this study is devoted to a review of the limited nature of our analysis, including a discussion of the less tangible economic effects that have not been identified.

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*This approach to describing the culture industry was suggested by Louise Wiener's analysis of the national culture industry, c.f. Louise Wiener, "The Cultural Industry Profile," unpublished memo, January 1979; developed for submission to the Federal Council on the Arts and Humanities as part of a broader issues identification memorandum. Data cited above are conservative if only because census confidentiality requirements limit the availability of data when the number of firms is small. SIC classifications with suppressed data are indicated above by "+" intended to signify that the actual number is greater than that shown. Employee data indicates total number of persons employed whether full or part-time.

SECTION III: THE ECONOMIC EFFECTS OF EIGHT CULTURAL INSTITUTIONS ON THE ST. LOUIS METROPOLITAN AREA

A. Study Procedures

Scope of Study

This study reports on the economic effects of the eight local cultural institutions selected by the Arts and Education Council of Greater St. Louis and described briefly at the end of Section I of this report. The organizations examined are illustrative of various types of cultural attractions available locally but are not a scientific sample. No attempt has been made to assess whether the effects attributable to the examined institutions are typical of the broader universe of St. Louis area cultural activities. Additional caveats concerning the interpretation of study findings and their use in developing cultural or economic development policies are presented in the concluding section of this report. The conservative and limited nature of our methods is reviewed below. In the discussion that follows, terms such as "local," "the St. Louis metropolitan area," and "the St. Louis region" are used interchangeably to identify the St. Louis Standard Metropolitan Statistical Area (SMSA), which, as noted earlier, includes Franklin, Jefferson, St. Charles and St. Louis Counties in Missouri, and Clinton, Madison, Monroe and St. Clair Counties in Illinois. All figures are for fiscal 1978 unless otherwise noted.

Study Methods and their Limitations

To assess the local economic effects of arts institutions, we have developed an approach that focuses on the impact of institutional operations on important sectors of the community. Various aspects of

institutional operations are referred to as direct effects. The conservative and limited nature of the model reflects its narrow focus on the most readily available direct effects: local spending by the institution, its staff households, guest artists, and audiences. These direct effects are then analyzed using a 30 equation model to determine secondary effects on government, business, and individuals. The discussion below highlights various other conservative aspects of our methodology that may lead to an underestimate of total direct effects. In particular, the reader is referred to the discussion of audience spending which reviews the impact of our conservative approach to identifying local and visitor spending.

Direct effects are identified using the procedures discussed below. These expenditures made in the community by the institution, its staff, guest artists and audiences have a secondary impact inasmuch as they lead to local personal incomes and jobs, additional local business volume, bank deposits, investments by firms in needed property and equipment, and tax revenues from such sources as sales, property and income taxes. We have sought, in effect, to trace the impact of a flow of dollars through the community beginning with an initial expenditure by the examined institutions, their staff, guest artists and audiences.

Local expenditures by the institutions represent a return to the community of income from various sources. These include grants from private and governmental sources, contributions, sales to non-local residents, and endowments. Some portion of institutional income represents "new" dollars in the sense that they were not already in the community and might never have appeared or remained were it not for the examined

institutions. For example, ticket and other sales to visitors involve dollars not already in the community as may all or a portion of grants from various private and governmental sources. We have not attempted to identify "new" dollars except in the case of visitor spending nor have we examined the extent to which the arts restrict imports, i.e., include sales that might have gone to institutions outside the community had there been no locally available activities.

Many persons believe that there is a richer, less tangible, and more indirect sense in which arts and cultural activities affect the local economy. We have traced the impact of expenditures directly associated with institutional operations. Some persons believe that the availability of cultural attractions has an additional impact due to effects on the perceptions, satisfactions and resulting behavior of households and firms, (for example, the decision by a firm to locate in the community or remain and expand.) No attempt has been made to identify and assess these more subtle and indirect relationships.*

Data Requirements

It was necessary to conduct several surveys in order to identify local spending by the examined institutions, their staff, guest artists and audiences. Institutions were asked to complete a data inventory which

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*These issues are explored in more detail in David Cwi, "Models of the Role of the Arts in Urban Economic Development", forthcoming in Economic Policy for the Arts, Hendon and Shanahan (eds.), ABT Books, 1980. Research on the implications of "economic impact" data for regional cost-sharing of arts and cultural institutions by the several units of government that comprise a metropolitan area can be found in David Cwi, "Regional Cost-Sharing of Arts and Cultural Institutions," Northeast Regional Science Review, Vol. IX, 1979.

includes necessary information on their operating and financial characteristics, including total expenditures with local firms. This inventory was completed with assistance from local study staff. Questionnaires were also completed by the staff and audiences of the examined institutions. In addition, extensive data were collected from locally available reports on matters as varied as the tax rates and bases for all local jurisdictions, local governmental expenditures, and the number of local housing units and households. Our procedures included the training and monitoring of local study staff together with documentation of local procedures. Various procedures were utilized to assure audience study quality. A complete review of data requirements and procedures is provided in a forthcoming technical supplement. Selected issues regarding estimates of audience spending are reviewed below.

B. Direct Effects

The direct effects of the examined institutions include local spending for goods and services, salaries and wages to local residents, and expenditures by guest artists and audiences. Each of these effects is discussed below. As noted earlier, we have not identified the extent to which these direct effects involve "new" dollars except in the case of visitor audience spending. Exhibit 5 presents selected data on institutional direct effects during fiscal 1978. These direct effects lead to secondary effects involving local businesses, government and individuals. These are reviewed immediately following our discussion of direct effects.

Exhibit 5

Summary of Direct Effects of Eight Arts Institutions

in the St. Louis SMSA, FY 1978

	Total for all Institutions	% of Total Direct Spending	Highest and Lowest Values of the Examined Institutions Low	High
Local expenditures of the institutions for goods and services	$ 5,248,714	25%	$60,600	$1,414,789
Employee salaries and wages	$ 7,652,004	37%		
Local audience spending (other than ticket price)	$ 6,600,197	32%	$ 7,326	$1,269,028
Non-local audience spending (sole reason)*	$ 1,290,134	6%	$ 2,472	$ 391,313
Guest artist spending	$ 119,576	**	$ 0	$ 56,980
TOTAL DIRECT SPENDING	$20,910,625	100%		

*Only includes spending by visitors indicating that attendance at the examined institutions was the sole reason for their visit to St. Louis. For data on other classes of visitors see text and Exhibit 6.

**Less than 1%.

Local Institutional Expenditures for Goods, Services and Salaries

It is estimated that the examined institutions made 82% of their expenditures for goods and services with local vendors and that this totalled $5,248,714. The percentage of non-labor expenditures made locally by the examined institutions range from 43% to 95%. An additional $7,652,004 was spent for salaries and wages to local households. No estimate has been made of the impact of additional earned and other income by institutional employee households. (The average percentage of total household income earned at any one of the examined institutions was reported by their full-time employees to range from 84% to 100%.)

Guest Artist Spending

Each year, cultural institutions also contract with non-resident designers, directors, conductors, featured soloists, touring groups and others. These non-resident "guest artists" were reported to have spent a total of $119,576 locally. No attempt has been made to include spending by guest artist entourage.

Audience Spending

Decisions regarding the handling of audience data can have a major impact on "economic impact" estimates. Be apprised that we have only counted the ancillary spending of visitors from outside the metropolitan area who indicated that attendance at the arts event was their sole reason for being in the community.* At some institutions this is a small

*Persons may visit a community for a number of reasons and once there may happen to attend a cultural event, a decision they made only after they arrived. Under these circumstances, it seems inappropriate to count expenses incurred during their visit as an impact of the cultural institution. Even when they planned ahead of time to attend the cultural activity, this may not have been the sole reason for their visit. In keeping with studies to data, we have counted all complementary spending by local audiences as an impact of the arts. This should not be taken to imply that this spending might not have occurred had there been no arts activity (c.f. the caveats that conclude this report). These issues will be explored further in the paper in progress reviewing the entire Partnership Cities project.

percentage of total visitor attendance and spending. It is important to note that many visitors indicated that they had planned ahead of time to attend even though attendance at a cultural activity was not the sole reason for their visit. Exhibits 6 and 7 present selected data on visitor spending. These data can be used to estimate the impact of audience spending utilizing other (less restrictive) assumptions.

As can be seen from Exhibit 6, total attendance by local residents is estimated to be 1,995,972 persons.* At the examined institutions, local audiences spent sums ranging from $1.00 to $4.36 per person per visit for items such as meals and parking. During fiscal 1978, local audiences are conservatively estimated to have spent $6,600,197 over and above admission fees.

An estimated 507,528 visitors from outside the SMSA attended the examined institutions during fiscal 1978. They comprised from 2.6% to 38.4% of total attendance depending on the institution. Of these visitors, 39,672 are estimated to have visited St. Louis specifically to attend the institutions under study. Many other visitors expected to attend while visiting St. Louis, but it was not their "sole reason" (c.f. Exhibit 7).

Visitors from outside the SMSA are of special interest inasmuch as their spending represents "new" dollars. Across all examined institutions,

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*In evaluating audience expenditures, it is important to note that audience surveys conducted to estimate audience spending were carried out in the late fall and winter. While this fell within the season of several of the examined institutions, it excluded the spring and summer months. This may have affected estimates of the number of visitors to the St. Louis area that attended the institutions as well as estimates of audience spending. In addition, data on average per capita spending, while appropriate for the calculations necessary to estimate economic effects, may be less useful as a descriptive measure of a typical audience member's spending. Median spending was significantly less due to the fact that many parties reported none or very little spending. These issues, including the quality of data on spending available from self-administered questionnaires, will be explored further in the paper in progress reviewing the entire Partnership Cities project.

Exhibit 6

Audience Summary Data for Eight Arts Institutions in the St. Louis SMSA*

	Total Over Eight Institutions	Highest and Lowest Values for the Examined Institutions Low	High
Total Attendance			
Local attenders	1,995,972	7,326	783,289
Non-local attenders (total)	507,528	227	212,383
Non-local attenders (sole-reason)	39,672	76	12,033
	Average Over Eight Institutions		
Where Audience Resides			
% residing:			
1) in St. Louis	17.6%	12.4%	26.1%
2) outside St. Louis but in SMSA	62.1%	42.4%	82.5%
3) outside SMSA	20.3%	2.6%	38.4%
Audience Spending			
Local Audience			
% of individuals reporting any spending	63%	26%	78%
Per Capita spending	$3.31	$1.00	$4.36
Non-local Audience			
Per Capita spending:			
sole reason	$32.52		
not sole reason (other visitors)	$157.04		
Other Non-local Audience Data			
Mean distance traveled to event/performance:			
sole reason	82 miles		
not sole reason (other visitors)	80 miles		
% staying in hotel:			
sole reason	22%		
not sole reason (other visitors)	29%		
Mean number of nights in the area:			
sole reason	0.63 nights		
not sole reason (other visitors)	4.06 nights		

*Surveys conducted in Fall and Winter of 1978-79. Attendance adjusted to exclude in-school performances and institutional events outside the SMSA. The average reported for all institutions is weighted based on this adjusted attendance. See technical supplement for the information on methods and procedures.

Exhibit 7

Eight St. Louis Arts Institutions: Percentage of Audience from Out-of-Region

Name of Institution and Total Audience Sample Size	% Audience From Out-of-Region	% of Out-of-Region Audience Who Expected to Attend Institution	% of Out-of-Region Audience Who Came Specifically to Attend Institution
St. Louis Art Museum (n=364)	26.8	66.3	5.6
St. Louis Conservatory and School for the Arts (n=116)	2.6	100.0*	33.3*
St. Louis Symphony (n=728)	7.3	67.3*	20.4*
Missouri Botanical Gardens (n=525)	38.4	52.1	6.2
McDonnell Planetarium (n=225)	28.6	37.3	5.1
Loretto-Hilton Repertory Theatre (n=1162)	5.1	56.4*	25.5*
Museum of Science and Natural History (n=534)	21.4	53.6	7.3
Dance Concert Society (n=837)	6.7	80.4*	6.1*

* There are only a limited number of visitor cases in these instances due either to small sample size or to the small percentage of visitors in the audience on the dates surveyed. These data should be treated with caution.

surveyed out-of-region "sole reason" visitors reported per capita expenditures of $32.52, resulting in total expenditures of $1,290,134 that can be conservatively attributed to the drawing power of the examined cultural activities.* Persons for whom attendance at the cultural institutions was not their sole reason for being in the community spent an additional $73,472,106.

C. Secondary Effects

The direct effects described above represent purchases of goods and services from local firms by the examined institutions, their staff, guest artists and audiences. As we have indicated, some of these purchases are made with dollars already in the community, e.g. that portion of admission income received by the institution from local residents (as opposed to visitors) and returned to the community through institutional salaries, wages and local purchases of goods and services. Included also are contributions of payments for services from local government. Data on government revenues received by the examined institutions in fiscal 1978 is presented in the section on government expenditures and revenues.

These direct effects, some of which involve "new dollars," represent institution-related expenditures with local firms and local households. This income is in turn respent by them. Respending in the community of dollars identified as direct effects leads to secondary effects involving local businesses, governments, and individuals. These secondary effects

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*As can be seen from Exhibit 7, at several institutions the sample of visitors was so small as to make analysis difficult for items as variable as visitor spending. Analysis across institutions was performed as described in the technical supplement. Estimates of visitor spending should be treated with caution.

take a variety of forms, including additional local personal income and jobs, additional local business volume, bank deposits, investments by firms in needed property and equipment, and tax revenues from such sources as sales, property and income taxes.

Secondary Business Volume, Personal Income and Jobs

Interindustry or input-output analysis has evolved as a principal analytical tool for identifying secondary effects such as secondary business volume, personal income and jobs. Because an appreciation for the technique is useful for understanding these secondary effects, we will take a moment to briefly review it. A principal purpose of the technique is to identify the portion of institution-related direct effects that is respent locally by local households and firms and to assess the impact of this respending.

The process is called "interindustry" analysis because it begins with the recognition that a sale in any one industry results in a complex interindustry interaction as firms buy and sell to one another. To produce and sell an additional unit of output, a firm requires a variety of resources, including goods, services, and labor. Some of these needs can be met locally through purchases from local firms. Others cannot. Consequently, only some portion of any dollar of sales remains in the community; namely, that portion that is returned to the community through local salaries and purchases from local suppliers. These suppliers in turn must purchase goods, services and labor. Some of their needs can be met locally and others not. This leads to further leakage. (Hence, the importance of industries that bring new dollars into the community.)

Similarly, households that receive income from local firms meet some of their needs through purchases from local firms while other needs are met by purchases made outside the community.

Thus, an initial dollar of sales in one industry results in a chain of transactions involving other industries which return some portion to the local economy to the extent that their needs can be met locally. By adding up the diminishing increments of this original dollar after every transaction with local vendors, we can estimate total business volume associated with an initial dollar of sales. A similar process can be used to identify the portion of this dollar of sales that is respent by local firms as salaries and wages. Estimates can also be made of the number of jobs in other business sectors supported by a chain of interindustry transactions beginning with institution-related direct effects.

Input-output coefficients were used to estimate secondary business volume, personal income and jobs associated with the fiscal 1978 direct effects of the examined institutions. We estimate that the secondary business volume will eventually total some $42,246,030. This is estimated to result in $15,899,168 in additional wages representing 2,005 St. Louis area jobs. These jobs are in addition to the 510 individuals employed full-time at the examined institutions.*

Additional Investment and Expansion of the Local Credit Base

Additional secondary effects include an expansion of the local credit base due to bank deposits held locally by the examined institutions, their

*Does not include employees living outside the SMSA, nor does it include the 25 full-time equivalent employees paid under the Comprehensive Employment and Training Act (CETA). Volunteers are also excluded from the economic impact analysis.

employees, and the local businesses benefitting from institution-related direct effects. We estimate that average monthly fiscal 1978 balances in business and employee savings and checking accounts totaled $6,641,360. When reduced by federal and state cash reserve requirements, this allows an initial expansion of the credit base totalling $6,058,120.

Finally, in fiscal 1978 area firms benefitting from institution-related direct and secondary business activity are estimated to have invested $12,445,444 in plant, inventory and equipment in support of this business volume. This represents the fiscal 1978 value of these assets not expenditures made in fiscal 1978, although a portion of these assets may have been acquired in that year. Expenditures were not necessarily made with local firms. Exhibit 8 presents estimates for each of the secondary effects discussed above.

D. Government Expenditures and Revenues

In addition to estimating the direct and secondary effects on businesses and individuals attributable to the examined institutions, we have sought to estimate the effect on local government revenues and expenditures in fiscal 1978. Local governmental revenues examined include real estate taxes paid to metropolitan area jurisdictions by the examined institutions and their employee households as well as a portion of property taxes paid by businesses benefitting from institution-related direct effects. Estimates were also made of local sales and income tax revenues attributable to institution-related direct effects (excluding tax exempt expenditures by the institutions themselves.) Additional governmental revenues identified include local hotel taxes, gasoline taxes and parking revenues. Fees to local governments paid by employee households are not included.

Exhibit 8

Summary of Secondary Economic Effects for Eight Arts Institutions in the St. Louis SMSA, FY 1978

Secondary business volume generated by institution-related direct effects	$42,246,030
Secondary personal incomes generated by institution-related direct effects*	$15,899,168
Number of secondary full-time jobs in the St. Louis SMSA attributable to institution-related direct effects**	2,005
Initial expansion of the local credit base	$ 6,058,120
Current value of backup inventory, equipment and property	$12,445,444

*Does not include $7,652,004 in salaries to employees at the eight arts and cultural organizations.

**Does not include 510 full-time jobs at the eight arts and cultural organizations.

Our estimates of costs to local governments in the St. Louis area are based on estimates of local governmental operating costs associated with the provision of services to employee households including the cost of public instruction for households with children in the public schools. (No estimate has been made of the costs associated with services to the institutions themselves.) Local government contracts for services, grants and operating subsidies are included when applicable and are presented in Exhibit 9. No estimates of foregone property taxes were made.

Exhibit 10 summarizes institution-related governmental costs and revenues. Included as costs are local governmental grants and fees for services (cf. Exhibit 9). In reviewing Exhibit 10, bear in mind the limited nature of our analysis. No information is available by which to assess whether the identified effects on business, individuals and government are typical of the broader universe of St. Louis area cultural institutions. The tax effects shown are specific to the examined mix of institutions.

Revenues to local government include real estate taxes paid to jurisdictions in the St. Louis SMSA by the arts institutions and their employees, and taxes on business property devoted to servicing the institutions. These totaled $683,664 in fiscal 1978. Income taxes attributable to institutional employees and their households totalled $61,012. Sales taxes, local hotel taxes, gasoline taxes, restaurant taxes, and state-aid to local governments attributable to institution-related staff households provided an additional $372,121 in local government revenues. Parking

Exhibit 9

Government Revenues of Eight Arts Institutions

St. Louis SMSA, 1977-1978[1]

	Federal[2]	State	Local[3]	Total
Missouri Botanical Gardens	$ --	$ 40,000	$ 40,000	$ 80,000
Dance Concert Society	29,451	64,144	--	93,595
McDonnell Planetarium[4]	--	--	291,025	291,025
Museum of Science and Natural History[4]	--	--	538,225	538,225
St. Louis Art Museum[4]	215,000	81,780	2,108,372	2,405,152
St. Louis Conservatory and School for the Arts	333,906	17,300	--	351,206
St. Louis Symphony	169,682	770,947	282,876	1,223,505
Loretto-Hilton	55,000	106,626	115,000	276,626
TOTAL	$803,039	$1,080,797	$3,375,498	$5,259,334

SOURCES: Institutional Data Inventories, Auditors' Reports, 1977-1978.

[1] Excludes non-operating grants.

[2] Excludes CETA funds.

[3] Includes all revenues received from governments in the SMSA.

[4] Subdistricts of the Metropolitan Zoological Park and Museum District. Amounts shown are direct appropriations out of property tax revenues to St. Louis City and St. Louis County.

Exhibit 10

Selected Revenues and Costs to Local Government Attributable to Eight St. Louis Arts Institutions[1]

Revenues	
Real estate taxes paid to jurisdictions in the St. Louis SMSA by the arts institutions, their employees, and business property devoted to servicing the institutions	$ 683,664
Locally retained sales tax on institution-related business volume	$ 163,500
Local income tax revenues attributable to institutional employees[2]	$ 61,012
State aid to local governments attributable to institutional employee households	$ 134,400
Hotel taxes	$ 4,266
Restaurant tax	$ 69,955
TOTAL	$1,116,797
Parking revenues[3]	$ 262
Total revenues to local governments	$1,117,059
Costs	
Total costs to local government	
Operating costs of local governments and schools[4]	$ 611,937
Direct appropriations[5]	$2,937,622
Grants to study institutions	$ 437,876
TOTAL	$3,987,435

[1] Does not include estimates of sales, property, or income taxes associated with institution-related secondary effects. See discussion in text.

[2] St. Louis City earnings tax based on 1% of employee gross earnings. Does not apply to the Loretto-Hilton, Museum of Science and Natural History, or CASA. Does not include effects due to other members of employee households, since their place of work is not known.

[3] Based on estimates made by institutional personnel.

[4] Includes cost of services to employee households not services to institutions.

[5] To Planetarium, Museum of Science and Natural History and St. Louis Museum of Art.

revenues were estimated at $262 for a total of $1,117,059 in local government revenues attributable to the examined institutions.

Sales, income and property tax estimates are undoubtedly conservative inasmuch as no estimate has been made of taxes paid by individuals benefitting from institution-related secondary effects. In addition, no attempt has been made to assess the favorable or unfavorable spillover effects of institutional operations on surrounding taxable property values. These may be either positive or negative. Finally, no attempt has been made to assess the governmental costs or benefits associated with the more subtle effects claimed for the arts and alluded to at the outset of this discussion of economic effects. Our approach to estimating tax revenues is described in the separate technical supplement accompanying this report. Data used in developing these estimates are also included.

Results of the employee survey indicate that 39% of employees at the examined institutions reside in the city of St. Louis with the remainder concentrated in St. Louis county. Approximately 46% of employees are homeowners. Employees report a total of 224 children in local public schools.

Costs to local government included $611,937 in operating costs of local governments and schools, $437,876 in local government grants to the examined institutions, and $2,937,622 in direct appropriations for a total cost to local government of $3,987,435. As noted above, this does not include additional costs thay may be associated with specific governmental services to the examined institutions.

The following section concludes this report with caveats regarding the study findings, including cautions against the possible misuse of the findings.

SECTION IV: CONCLUDING CAVEATS REGARDING STUDY FINDINGS

We have sought to identify a limited range of effects directly traceable to institutional activities when the institution is viewed simply as a local business enterprise. The importance of artistic and cultural institutions to individuals, households, and firms and hence their broader and less tangible benefits may have little to do with public awareness of their specific economic attributes. We have focused quite narrowly on direct dollar flows represented by the institution's local expenditures for goods, services and labor and the expenditures of its guest artists and audiences. We have called these direct effects and conservatively estimated the secondary effects in a variety of areas. For the reasons noted in the discussion of these effects, some estimates may be quite conservative, especially estimates of audience spending and its impact.

The data contained in this report can be used to address a number of questions regarding the economic role of the examined artistic and cultural institutions. It is clear, for example, that they serve both residents of and visitors to the metropolitan area. Arts activities may sometimes be solely responsible for inducing persons outside metropolitan areas to make day and overnight trips. It may be assumed that even when arts activities are not solely responsible for these visits, they may often be one among other planned activities, and so may directly contribute to increasing the number of visits.

As we noted earlier in our brief review of the St. Louis area economy and arts community, this study is not intended to pass judgment on the

total local cultural industry. In addition, we have only sought to identify direct and secondary effects as defined in this report. This means that a variety of potentially interesting effects of the arts have been overlooked, effects that are not very well understood in any case. Included are claimed effects of the arts that may be important to central cities as well as to the regions of which they are a part.

For example, arts events and facilities regularly bring thousands of suburban residents back to the city and can help draw people to redeveloped downtown and neighborhood areas. This may help to maintain markets for other city businesses and create an urban environment attractive not only to residents but to tourists and convention visitors as well. Consequently, arts and other facilities may be useful in helping to create a climate in which the decision to locate or remain in the city or region is viewed not as a risk but as an investment. But good research is scarce. And the role of the arts and the range of their more subtle effects is far from clear.*

Policy makers are increasingly aware of the need to plan for multiple objectives. Activities and programs that were once viewed in complete isolation now must be understood in terms of the contributions they can make to a community's broader objectives, including objectives in such areas as economic development and community revitalization. This study is not intended to pass judgement on the economic development role of specific arts activities. In this connection it may be relevant to repeat and

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*In particular, it is difficult to isolate the arts from various other aspects of community life, ranging from historical and social factors, to property taxes, the availability of investment dollars, changes in family size and structure, metropolitan growth policies, and so forth. Further research is necessary before we will be able to model these more subtle effects and be in a position to predict the full potential impact of an investment in an arts activity.

expand the caveats presented in the introduction to the Baltimore Case Study pilot project which preceded the Partnership Cities Project.

(1) In presenting our analysis of direct and secondary effects we are not passing judgement on the role of the examined institutions or cultural institutions in general in achieving economic development or other objectives. If direct and secondary effects are relevant to public funding for various leisure services then selected cultural institutions may warrant support more than many other leisure services. However, it cannot be inferred from this study that such support is to be preferred in general over other alternative uses of public or private dollars in the fulfillment of specific economic development objectives.

(2) Some of the economic effects cited may have occurred even in the absence of the examined institutions. For example, arts institutions vie for leisure-time dollars that might have been spent in the community even if they were not spent on the arts. Conversely, some of the interest in artistic and cultural activities may be sui generis so that audiences might have travelled to other cities to satisfy their desire for the arts, or they may have substituted by attending complementary local or touring activities. In short, if specific institutions had not existed, we simply do not know whether others would have, or, in any case, the extent to which the economic effects noted would not have occurred.

(3) In providing this analysis of the economic effects of a sample of cultural activities we are not advocating that economic impact data be used as important determinants of public policy toward the arts especially in the absence of clear cut policies of support of the arts for their own sake.

(4) It is important to note that the institutions examined in this study are at best a sample of a much wider range of local non-profit and commercial activities. In short, the impact of the arts and cultural sector as a whole is much broader than portrayed in this report.